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A PRACTICAL THEORY AND TREATMENT OF PULMON- ARY TUBERCULOSIS.

BY FRANK S. PARSONS, M. D.,
PHILADELPHIA, PA.

Editor of The Times and Register.

(Continued from last number.)

Pulmonary tuberculosis arising from "taking cold" is primarily a pure local affection. If too wide an area of lymphatics are not involved cure will come with suppuration, as evidenced by the cicatricial repair found in autopsies, before mentioned.

Struma, associated with general lymphatic derangement, is phthisis expending itself in the lung, and is formidable in proportion to the derangement. Struma, it will be remembered, is referred to as scrofula generalized, in distinction from lymphoma, or scrofula localized, both being dependent on more or less lymphatic stasis.

Recalling the pathology of chronic inflammations in general, it will be remembered that there exists a continued stagnation of lymph and blood, as well as coagulation in their vessels, and a condition of hyperplasia is first induced in the walls of these vessels, and then in the immediately surrounding parts. The process being a continued one must be gradual, for by a sudden and complete stagnation we get active or acute inflammation, and not chronic.

What, then, is the cause of lymphatic stasis, leading to a condition which may result in tuberculosis?

We know that an irritation acutely expressed, as in the case of burns, induces active inflammation. We also know that irritation of a mild degree, applied continuously, induces

chronic inflammation, as in the case of gastric catarrh from the alcoholic habit. We have seen how irritation, increasing the flow of blood to a part, tends to produce hypertrophy of that part; yet, that so long as the efferent vessels carry off the additional waste there is no tendency to ulceration or retrograde tissue metamorphoses, other than that induced by the contraction of new tissue formation, and the secondary cutting off the blood supply. But as soon as the correlation between the efferent and afferent vessels becomes interfered with, and the waste products are left in the part, ulcerative and suppurative changes take place. (This is evidenced in malignant tumors also.)

But, the question whether these chronic inflammations are always induced by irritations, and by what such irritations are caused, is still speculative.

Obviously, lymphatic stasis is the result of obstruction to lymphatic circulation. Whether this obstruction exists in a coagulation induced by foreign bodies, or by an interference with the normal tone or healthy condition of the arterial blood supply (probably due to a deficiency in oxygen or an oxidizable element, or an increase in the noxious gases of the blood) and, hence, increasing the amount of waste to be carried off by the lymphatics, thus producing sluggishness in their circulation, is, of course, an open question.

One thing is certain—that is the irritation, if such there be, must be applied continuously to a point where the lymphatic stasis is complete enough to cause, of itself, the remaining pathological tissue changes in the disease. This must occupy a considerable period of time, and it is not apparent how a multitude of bacilli, simply as foreign bodies, can remain in any spot of the rapidly-moving blood current long

enough to irritate and thereby produce such coagulation, or stasis, in an open lymphatic system of vessels. Bacilli, entering the blood current, must encounter difficulty of development except when at rest, or the oxygen is limited below the normal, and any such rest of the blood current would imply stasis somewhere in the lymphatics.

It may be well to pause here to consider the germ theory as relating to the production of tuberculosis.

From all that has been demonstrated on the living human organism, germs appear to belong to two great classes:

First, those that are said to produce acute diseases.

Second, those that are said to produce chronic diseases.

This division, which is here drawn for convenience, is apparently one of intensity of virulence, the former being active and extremely poisonous, but easily destroyed, the latter being less active, but of greater tenacity to life. The former may be illustrated by the Klebs-Loeffler bacillus of diphtheria, and the latter by the Koch bacillus* of tuberculosis.

It has been demonstrated that these germs will reproduce themselves in favorable media outside the body, and, when injected into the blood of susceptible animals, will—what?—produce their specific disease?—no!—reproduce themselves.

If one examine the carcass of a dead dog, or other animal, it will be seen that the body is full of living organisms, which, moreover, are not all of the same kind. It is also of common observation that these or-

ganisms are to be found occasionally on living animals, including the human species, who may be the subjects of suppurative lesions. They are found where decomposition is going on in some form. They feed on dead tissue and not on the living. So it is with bacteria. They are to be found in the waste products of the body. They are not able to subsist on healthy living tissues or cells, as evidenced by their destruction in them. Where suppuration and decay exist there will be found the bacillus. If it is one of the virulent kind found in diphtheria, it may inhabit the waste products of every throat irritated by a "cold," or every open sore or wound it comes in contact with, and may intensify the inflammatory action by its irritative presence. It reproduces nothing but its kind, and it seems probable that the determining factor of its virulence is the rapidity of its reproduction. The healthy throat is so rare, especially in children, that the field is ample for its generative powers. The above is as true of other germs, including the tubercle bacillus. They reproduce themselves in favorable media and atmospheric conditions, and are destroyed by unfavorable conditions.

The experiments conducted on Guinea-pigs and rabbits with cultured tubercle bacilli, to show that Koch's germ induces tuberculosis, do not prove of much value, inasmuch as these animals are very prone to tubercular processes from any sort of irritative interference with their lymphatic circulation, and especially so when such irritation is applied to a serous membrane, as the peritoneum.

It must be rationally argued that the favorable medium for one kind of bacillus may not be identical with that of another; for example: If the waste elements in the blood serum from cheesy degeneration be a cultivation ground for the tubercle bacillus, it does not necessarily imply that the same would prove a favorable field for the cultivation of the Klebs-Loeffler bacillus, and vice versa. Hence, various forms of germs may appear in different diseases, not

* (The products of bacilli, the toxalbumens, toxins, etc., which are said to be the ptomaines of disease, are duly considered in their connection with this subject; but it is difficult for the writer to understand how a poison, if such exist to cause disease can be found prior to the development of the bacillus, which is said to be the father of the poison; the poison certainly does not produce the bacillus; moreover, it is a pretty well established fact that symptoms of tuberculosis, or indications leading thereto, are more or less advanced before the appearance of the tubercle bacillus is demonstrable, or enters into the symptomatology.)

because the germs are specific, except as diagnostic phenomena, but because they develop and multiply in different media. It is not every sore, or diphtheritic throat that gives evidence of a Klebs-Loeffler bacillus, nor every healthy throat that does not contain more or less of them.

Without doubt, we imbibe, daily, germs of many descriptions. We breathe them in the air around us, and swallow them in the food we eat and the water we drink. So long as our excrementitious organs and the lymphatics are in a healthy condition there can be no spot for germs to congregate and multiply in the blood. Most of them are destroyed by oxygen, and none can germinate in the blood current when oxygen is in its normal quantity or in excess. This is evidenced by the results upon consumptives of living in ozonized atmospheres and high altitudes. Oxygen is the best sterilizer of which we know. Germs, alive or dead, will pass out with the waste products of the body if not hindered, by a stasis in some excrementitious organ.

Returning to our consideration of lymphatic stasis, we may assume that a cause for lymphatic obstruction may be found in an incompetent excrementitious organ, which theory is perfectly in accord with the acknowledgment of the lymphatic organ of tuberculosis. Such organ may be the seat of congenital or acquired incompetency.

Congenital incompetency may be due to a faulty intra-uterine nutrition, tending to dwarf the organ and limit its function; or such incompetency may result from some one of the many unknown causes common to other congenital deformities.

Acquired incompetency must depend on faulty nutrition after birth; this, without doubt, is due to a lower degree of oxidation in the cellular elements of the blood. Whether such lowering of oxidizing power be in consequence of a deficiency of oxidizing agents, according to Churchill's theory, or the outcome of loss in the available oxygen to vitalize the tissues, the result is the same; i. e.,

sluggishness of the efferent circulation by overcharging the lymphatics and veins with waste tissue elements, the ultimate backing up of waste products in the capillaries of the affected part, and, finally, stasis resulting in inflammation, which will be acute or chronic as the completeness of the obstruction be accomplished suddenly or gradually.

It is on complete oxidation that the healthy cellular life of the animal depends. Deoxidation means death. Life is opposed to death, and nature is continually striving to preserve the former by ridding herself of the latter. As soon as an animal cell is deoxidized it becomes devitalized and is crowded out of its relations with living cells. If it can pass out through the excrementitious channels, as nature intended it should, no harm will result, even if many bacteria are feasting on the defunct cell. If it cannot pass out, but is held by stasis or obstruction in relation with living cells of the part, we soon have a collection of such dead material causing irritation to the nerve elements* of surrounding tissue, and inflammatory results.

Deoxidation or other alterations in the chemical equilibrium of the normal human organism may be brought about in many ways. It would be interesting, in this connection, to note what the different effects are from atmospheric changes upon the chemistry of the blood. Different localities and seasons must have noxious chemical elements, which are detrimental to certain human organisms whose excrementitious powers are below the normal. There is no reason to suppose that chemical elements act differently than their natures, which are known spe-

*I incline to the opinion that we have, first, a stasis of waste elements; second, a nerve cell paralysis due to the stasis; third, increased blood supply to the part as a result of the paralysis, and which, owing to the existing obstruction, brings about the phenomenon—inflammation. Phagocytosis may be easily explained, inasmuch as a leucocyte, if it does not contain enough oxygen to vitalize it, becomes pus, and, hence, waste; if there is oxygen enough in the cell bacteria may be destroyed; otherwise, as a waste cell it may become the prey of the microbe.

cifically in the laboratory, determine that they must. Why, then, cannot gases in the air act chemically on the gases of the blood to produce disease, and this irrespective of any germ?

(To be continued.)

CLIMATOLOGY IN CIRRHOTIC RHINITIS.

BY C. ROBERTS BINDER, M. D.,
PHILADELPHIA.

Read before the County Medical Society, Dec. 12, 1894.

The pathological changes in atrophic rhinitis present a subject for much controversy—pathologists differing in their a priori investigations. Therefore, a clinical a posteriori reasoning is accomplished under difficulties which induce factionalism as to whether the tissue metamorphosis is the result of a progressive hypertrophy, or has it its own isolated causes classing it as an affection per se? Nevertheless, we have a cirrhotic state to combat. Let it be the result of a hypertrophy, as claimed by some researchers, or the result of a pathogenic coccus or bacillus, as accounted for by others, it still maintains the same course that scleroses do in other organs. That is, a prolific development of tissue cells, in various stages, from round cells to developed cicatrices, causing the caseous degeneration of epithelium, which result is directly due to a progressive contraction. This contraction, while homologous to the scleroses in other organs, owing to the situation is more accessible, and, consequently, more amenable to treatment by atmospheric changes, and directly subject to increased exacerbations when the surroundings are unfavorable. As for myself, I feel complacent over the fact that climate reveals to me measures of pronounced success in the amelioration and possible cure of this odious disease. As for local applications, my experience has been futile, though,

at the same time, I have persevered. Likewise, I do not doubt that this is the experience of all practitioners in the treatment of this stubborn malady; and, hence, it behooves the thoughtful rhinologist to consider some method at his disposal which will enable him to locate the patient upon a vantage ground, where the morbid changes will be inhibited, and the remnants of healthy tissue and glands be stimulated to normal physiological action, overcoming gradually a lesion that ridiculed a therapeutic medicinal treatment.

The paramount evil is apparent in this affection as in all chronic diseases—social ostracism. Truthfully, it is more apparent here than in some others; the offensive smell which is noticeable in the large majority of cases not only renders them unfit for many offices of social man, but it must be constantly a reminder of their infirmity, inducing melancholia and other psychological phenomena. The results of this condition can be depicted by observing physicians; that deplorable state which they have seen among the hopeless—the epileptics, the maimed, the phthisical and the insane. Since colonization has done more as a restorative to the epileptics than have medicinal or operative measures, and the healthy offspring of the tuberculous immigrant in Colorado demonstrates what can be done for the afflicted who fear nature's law of heredity, the scientific climatologist conjectures wisely when he considers "what might be done for the chronic invalid in colonies, established in suitable places, and arranged politically, that they might compete with their fellows for a livelihood." This would not only be a step toward Utopia, but a lesson of philanthropy that could only be accomplished by the highest grade of civilization, urged and abetted by a compassionate humanity. Moreover, when morphology, and this refers more especially to morphological teratology and embryology, is established systematically in medical diagnosis, then will the treatment of many chronic diseases resolve itself into colonization. The reason of this is

patent, for the profession will recognize more explicitly causes of evolution and also those of atavism.

Ozaena, the prevailing symptom, though some times absent—as I have seen it—is by no means diagnostic of the condition. Ozaena may be the result of tuberculous, syphilitic and carious ulcerations, and even a result of accessory disease, although Drake claimed originally that atrophic rhinitis never existed unless accompanied by antral, ethmoidal, or sphenoidal disease. Since, according to my view, the ozaena is due to the caseous degeneration of epithelium, this symptom is dependent entirely upon the intensity of the cirrhosis, and, if I may be allowed to introduce E. Frankel and Krause's theory, the diathesis and environments which favor the propagation of the "bacillus foetidus." Why the bacillus foetidus evinces itself in some cases and not in others, is a question that should be settled by the department of bacteriology. Although the clinician is fully aware that the diathesis, surroundings, and other incidentals dependent upon the vocation of each patient augments the development of this bacillus. Moreover, the site of the lesion is in itself a septic location, which is modified by the anatomic conformation of each individual's nose which is unfortunately attacked. This truth is another clew which the morphologist can employ in the revelation of the mysteries of anomalies and reversions. I have seen the typical nose of the anatomist's chart in clinics, but I have never seen two identical nasal chambers, either in a physiological or pathological state. Therefore, the normal structure, prior to the pathological development, is the foundation upon which the intensity of the lesion depends; hence the peculiarity of each individual case.

The turbinates are the selection by preference for the morbid change in the atrophy of the nasal organs, and the classical seat, in the major portion of the cases under my notice, has been the inferior and septal portion of the middle bone. Recent investigations have disclosed that the inspired air passes through the mid-

dle meatus, and that this is normal respiration. These investigations reveal to the climatologists the danger of vitiated air to an atrophic condition upon the middle bone. Hence the patient must have an ozonized air, air free from sulphurous smoke and noxious vapors of every description. In short, urban air, with its sooty and dusty composition, must be avoided in order not to increase the symptoms. There are three kinds of atmosphere admissible in the treatment; they are suburban, mountainous and sea air. The wisdom of choice depends entirely upon the circumstances, e. g., patients dwelling in large cities near the sea, or in seaport towns, should be sent to the highlands and locations where the relative humidity is less than at sea level. On the other hand, patients dwelling inland (I shall not say on highlands, for mountaineers are particularly free from atrophic rhinitis) should be sent upon sea voyages in order to derive full benefit. The suburban localities I wish only to mention as palliatives for extreme changes, as some patients cannot afford, for pecuniary reasons, to go farther than the adjacent counties of their respective homes. However, I recall one case which improved in the two months' time spent in the Schuylkill Valley, the desiccation of the secretion and odor being cursory when he returned for treatment. The cases which are restrained from the climatic therapy are generally those patients that present the most advanced lesions, but financial reasons prevent them from receiving the full benefit of treatment and advice. These are the cases that colonization would aid.

The ideal course in the climatology of this affection depends entirely upon the case in vogue. First, the general condition of the patient must be considered, e. g., is anaemia present? According to my observation, it is, in a large percentage of cases. I account for this morbid condition in the following manner:

The lesion involves the nasal portion of the respiratory tract, and, in my estimation, any lesion implicating this tract, whether in the

peripheral or central portion, prevents proper aeration of the blood. Hence, the anaemia varies proportionately to the amount of tissue involved in this cirrhotic process. Notwithstanding, the anaemia should be treated with haematinics and bracing atmosphere, in which there is an abundance of oxygen; the mountains of Pennsylvania and New York in summer, and the Atlantic seaboard in early spring fulfill these requisitions. Secondly, the patient's temperament should be considered. I should divide disposition into two states: irritability and repose. The general rule is, usually, infrangible, i. e., light-complexioned mankind belongs to the reposed in temperament, while dark-complexioned are irritable. In the selection of an abode of health for the afflicted, the above must be well borne in mind; as it is of the utmost importance to send the irritably inclined to climates which are of a sedative nature. Contrarily, the reposed should be sent to stimulating resorts, where animation will cause them, in part, to forget their malady.

The primary requisite in promoting the domination of the healthy tissue and fostering a metamorphosis in the disorganized structure in all cases is out-door life; that is, not a definite length of time each day, but, if it is possible, to remain in the atmosphere 24 hours it will the better accomplish the desired result. The sleeping apartments should be roomy, and a free circulation of air should be active during the sleeping hours as well as when the room is unoccupied. Above all avoidances steam radiation should be placed. The dry air should be eschewed at all times, for the reason that the sufferer with cirrhotic rhinitis—unless the pathological surface is of small area, and this I have never seen—cannot infuse the inspired air with sufficient moisture to insure a salutary influence upon his economy. Extreme cold should be shunned, and also localities that are extolled for dryness, per example, Colorado and New Mexico, in the United States, and Egypt abroad. One of the worst evils which characterize

these places is the violent sandstorms within their domain, causing a mechanical irritation to a membrane passing through the various stages of chronic inflammation, and also causing a painful nasopharyngitis. In all cases that have come under my notice in Philadelphia, subjectively and objectively, the disease has been augmented during prolonged dry and cold spells. Contrarily, the summer months, especially the moist, warm days, benefited and relieved the patients, and checked the process of destruction.

The abode and climate of preference, from which superior results will be obtained, is one the composition of which consists of: picturesqueness, warmth, balminess, equability, stimulation or sedativeness (according to the temperament of the patient). Of these conditions I shall speak separately.

Picturesqueness affords solace to the restless and fosters a feeling of joy and careless demeanor in those who are morose. In fact, there is nothing so free of sickly contamination as an ever-varying landscape.

Warmth is the next quality which I wish to extol; and by warmth I mean a temperature of over 70 degrees F., and it may range to 84 degrees F. This is requisite for two reasons; it aids in moistening the inhaled air, and, owing to its mildness, the small space of healthy tissue can perform its function admirably. Cold air, on the other hand, not only cannot impregnate itself with moisture, but it is deleterious to the healthy membrane, and causes its hasty destruction. The second reason for warm air is the opportunity that it affords for out-door exercise, without bundling in swaddling clothes, which impede free circulation and interfere with the glandular system. This system must be kept as near perfect as possible if a cure is to be hoped for in rhinitis cirrhotica. Moreover, accompanying this affection, or rather as one of the sequelae, is a functional disturbance of the aural organ, due to agglutination of the mouths of the Eustachian tubes in the naso-pharynx. The dripping of viscid mucous from the nose

is responsible for this plastering process. Warmth, combined with a moderate, relative humidity, is not only a preventive of this troublesome symptom, but a positive relief in cases of some length of duration.

Balminess is a combination of moisture and sunshine tempered with warm currents such as would be blown from the ocean by light breezes, and experienced in resorts along the southern coast of California, eastern shores of Italy, and that delectable country of southeastern France and adjacent Italy washed by the shores of the Mediterranean Sea. It insures the fatuitous victim from the fear of "catching cold," and for this reason allows him to take out-door exercise with a feeling of immunity. The moisture in a balmy atmosphere is due to the degree of relative humidity; the latter is directly dependent upon the influence that the absolute humidity has upon the temperature. Since warmth is a component part of the climate I have recommended, it is well to observe that an extremely damp locality be avoided, for the results which are hoped to be obtained from moisture will not be forthcoming, but instead the patient will suffer from a high degree of relative humidity. In order to avoid excessive humidity, it is well, according to meteorological observations, to eschew extreme temperatures.

The equability of which I have spoken as a factor in the selection of a suitable domicile for atrophic conditions of the nares applies more to the equability of the warmth which I have already described. Coasts or islands washed by warm ocean currents are to be mentioned as possessors of equability. Truly all large bodies of water avert the rapid rise and fall of the temperature wave. It is needless for me to explain this phenomenon, but I should like to make an exception, and that is, the great lakes of America, the confines of which are visited by most severe rises and falls of temperature in a short period of time. The direct cause of this, I think, is the plateau-like situation of these lakes, as this is not true of Salt Lake, which is a

basinic region, though elevated at the same time some 4000 feet.

In the Transactions of the American Climatological Association for the year 1890, Dr. A. C. Standart gives a statistical study of the climate of this region; and, as a winter resort, for equability and bracing tone, a better selection would be difficult to make in cases of rhinitis cirrhotica. It is not cold enough to hinder outdoor exercise. Moreover, this degree of cold would act as a massage to the healthy tissue of a patient whose atrophy was of a low grade; but, for bilateral cases, with small area of healthy tissue in the nares, I prefer the southern oceanic treatment, either upon a suitable island, or a sea voyage.

It is with some regret that I speak of sea voyages, knowing that there is not the desired facility. There are no planned voyages by steamers departing from any of our seaports for southern sea benefits, calling at stations of interest and salubrity, so that the only expedient is a sojourn upon one of the islands in the Atlantic Ocean, such as the Bermudas, Azores, or Maderia Islands, combining equability and sedativeness.

The last qualities that are necessary considerations in the choice of selection are influences which bear upon the corporeal and mental faculties of the individual; they are sedativeness and stimulation. I have previously classed the variety of patients which improve best in climates possessed of one or other of these attributes. Sedativeness will be found in localities or resorts whose air is balmy, mild and bright, and whose elevation must not exceed 400 feet above sea-level. As stated before, the following islands are unwavering examples of this character, the Bermudas, Azores or Madeira. Stimulation is found at high altitudes, ranging from 500 feet to a mile above sea-level. Of the resorts which combine equability and stimulation, I may mention Nice, Mentone, Cannes and Villefranche on the shores of the Mediterranean; but, by preference, according to many climatologists, the islands in this sea are superior—Capri, Malta,

Majorca and Sardinia. In the Atlantic Ocean the Canary Islands are noted for their stimulating attribute, and in the Pacific mention may be made of Western Australia. The southern coast of California has an atmosphere the volume of which is equable and stimulating. The counties of that State bordering on the ocean are Santa Barbara, Ventura, Los Angeles and San Diego. All of these resorts have improved hostleries, and home comforts can be partaken of very liberally. Therefore, the physician need not hesitate to give his patients contrary advice owing to lack of accommodations.

In conclusion, I wish to state that recently two cases of atrophic rhinitis of which I am familiar developed tuberculosis of the lungs. Therefore, it appears to me that there must be fibroid changes in other organs, following the progress of the disease in the nose; or, while the destruction is active in the nasal organs, it is a suitable and favorable opportunity for the ingress of the tubercle bacillus. If this presumption cannot be refuted, then we have additional reason to treat this affection upon a climatic basis, both to prevent this result and to hasten the subsidence of the nasal lesion.

A FEW POINTS ON THE TREATMENT OF TONSILLITIS.

BY T. J. MCGILLICUDDY, A.M., M.D.

It may not be any longer fashionable to purge briskly in beginning the treatment of a severe acute attack of tonsillitis or quinsy, but it is nevertheless an extremely useful measure. It acts, not only as a revulsive, drawing off the congestion from the part through reflex vasomotor influences, but, I think, its principal advantage is in the removal of fermenting materials, mixed with the catarrhal secretions of the whole digestive tract, and which are, to my mind, the principal causative factors in setting up tonsillitis.

The "catching cold" is simply the exciting cause; the tissues are already in a state pre-disposing to in-

flammation, as they are a part of disordered digestive system, and, by continuity, if not by contiguity, the mucous membrane and its glands are already irritated.

The sulphate or phosphate of soda in hot water answers admirably as a cathartic in this condition, and is much to be preferred to calomel, colocyath, or other irritating or drastic evacuates. A good dose of senna tea is also useful.

As a local application I have lately tried in several cases of tonsillitis which were rather more stubborn than usual a preparation which I had used before in other conditions, i. e., kretol.

Kretol is a coal tar product, with a strong but not unpleasant tar-like odor; it is non-toxic and mixes readily with water. Its alkaline, soapy character makes its cleansing properties very marked, while it is an astringent of very great merit.

In the cases I have above alluded to, tannic acid and glycerine, chlorate of potash, and a solution of nitrate of silver had been used without any very appreciable benefit, the tonsils, in most of these cases, were enlarged to a greater degree than common, and deglutition in all of them was extremely difficult and painful. In each case a 10 per cent. emulsion was used as a gargle with a success which I confess astonished me, although I was certainly prepared to see some benefit accrue from its use.

A very short treatment in each case was sufficient to restore the throat to its normal condition, and I believe that we have in kretol an agent of great value for the treatment of tonsillitis. I would suggest that it is worthy of the notice of surgeons and throat specialists.

A gargle of glycerine and hot water will sometimes be productive of great benefit after we have been disappointed by the indifferent results obtained from the use of alum and other astringents of that class.

In some stubborn cases the inhalation of steam from a 20 per cent. hot emulsion of kretol will be followed by very good results.

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ARISTOL AS AN ANTISEPTIC POWDER IN SURGERY.

Since the era of antiseptics dawned upon us, medicaments have been applied over the surface of wounds in various ways quite unknown to our forefathers.

First came Lister's steam engine, the steam spray—medication a vapour; but this nebulous contrivance was hardly born before it died—atomization went.

Then came the irrigating machines, the complicated hydraulic apparatus, the syphon, the irrigating torrent which deluged everything and soaked, saturated and chilled the integument. But common sense and a large mortality soon swept this worse than useless contrivance aside.

The cursed, condemned and anathematized sponge and hand-basin have fought their way back to their legitimate places.

Next came powders, insufflators, etc. Iodoform, that toxic compound

of iodine and sulphur, which, though employed as an antiseptic, may any time poison our patient, and anyone who knows anything about bacteriology is aware that it possesses no antiseptic powder whatever, though all must admit that in tuberculous or syphilitic sores it exerts a most marvelous stimulating power in the process of repair.

After iodoform comes aristol, a proprietary drug, which is more efficacious than the former and without its dangerous lethal properties. Under all circumstances it is to be preferred to iodoform, when a deodorizer and antiseptic is called for.

Aristol is devoid of any of the offensive odors of iodoform, and, in light applications over wounded surfaces, forms an impervious scab, or shield, under which healing rapidly advances. It certainly is the most valuable dry powder we have in our possession at present for many lesions of the periphery.

Aristol is of immense value in the treatment of burns, having a remarkable influence for the relief of pain. It occupies a high place as a cicatrizing and antiseptic. It may be used in ointment or combined with bovine.

Aristol is of great value in malignant tumors, especially during the stage of ulceration, and may even be used internally for cancer of the stomach.

HEREDITY.

There is a class of people who seem to consider themselves very wise in laughing at what they presume to consider the foolishness of hereditary traits. These people do not get much comfort from Rev. Dr. Talmage, who, in a recent article, says: "Now, the longer I live the more I believe in blood—good blood, bad blood, proud blood, humble blood, honest blood, thieving blood, heroic blood, cowardly blood. The tendency may skip a generation or two, but it is sure to come out, as in a little child you sometimes see a similarity to a great grandfather whose picture hangs on the wall."

Dr. Talmage is right. There is no

question that we inherit the virtues and the sins of our ancestors. To believe to the contrary is not only to deny the teachings of Holy Writ, but to set aside the experience of all ages and peoples. The owner of the race horse says to us, "blood will tell," and the farmers know that it "tells" in their cattle and sheep, not only in physical development, but in disposition, in that character which in brutes nearest approaches to the mental qualities of man. If you cannot raise a trotter from a draft horse, why should you expect to raise a man of intellect from a trawp?

Instead of belittling heredity, we should not only acknowledge it but study it. Hereditary traits, if understood, give an index of character which, in proper hands, can save the born criminal from crime and the fop from ridicule. We believe in it, but we know that it can be made amenable to reason, and that it can be controlled by observation and education.

CHLOROFORM DEATHS.

A most inexplicable trait of certain people and nations is the remarkable tenacity with which they cling to their ancient customs and prejudices.

Sentiment, we will admit, is deep-rooted with the masses and yields only after centuries of a determined opposition.

We are led to these reflections from the present status of chloroform anaesthesia in Great Britain.

There, on those British isles, which have opened the way to greater progress and much more substantial advances than any other nation in the sciences and industries, in spite of a constant and ever-increasing mortality from the lethal section of chloroform, surgeons there still stubbornly persist in its use.

The London Lancet, in noticing "Deaths Under Chloroform," editorially, in a recent issue, cites an instance in which chloroform was given in the Great Northern Hospital with mortal consequences.

The patient went safely through the operation; but "a few moments

afterward she went into a faint and expired."

The writer inquires here, if it may not be probable that in this and similar cases chloroform played but a subsidiary part, and if we may not attribute death to general shock to the system, rather than the effects of the anaesthetics?

This remark leads us on to the consideration of great importance of a question which we will endeavor to consider at another time; but we may say here now that the general impression prevalent that aesthetics obviate the dangers of shock is scarcely correct, and that the comatose state into which we force our patient in no manner reduces possibility of mortal collapse, just at that moment when we are about to congratulate ourselves on the success of operative procedure.

But, we say, why, on what grounds still use chloroform, in any other than exceptional cases, when we have another anaesthetic, repeatedly proven, both by clinical operation and experimental, as the safest?

There seems to be but one possible excuse for the general preference of chloroform to ether in large hospital services among the poor, viz., on the score of expense.

It would be vastly better in the interest of humanity when the pecuniary side of the question becomes an important factor to rather, in minor operations, depend on peripheral cocaineization and reserve ether for capital cases only.

With a full knowledge of the imminent dangers always before us, it certainly would seem that when we adopt chloroform to the exclusion of all other well-known and much safer anaesthetics we take an unnecessary risk and in the event of one case terminating fatally, in the course of operation, we leave ourselves open to a civil action.

There is no use of straining further the scientific aspect of this question, as some have done in endeavoring to prove that death commences with the respiratory or cardiac reflexes early or late in operation, for the truth is in chloroform poisoning death sets in in various ways from

the moment of the first whiff to any time during manipulation, and not infrequently after inhalation has been discontinued.

MILK INFECTION.

Dr. Charles McLean, V. S., in his address before the State Dairymen's Association, said:

"Milk is the most easily contaminated of any article of diet used by the human race. It is the first article of food used, and remains an article of food in some form or other during our entire lives. Milk is one of the best mediums for a great variety of bacteria to live in. Milk becomes sour by the action of bacilli, because they turn sugar into lactic acid. Every minute milk remains exposed to the air it deteriorates, and the bacteria form, and it is next to impossible to prevent them getting into milk, as they lodge even before you can finish milking a cow. The common hay bacillus found in every stable, and as a matter of course in all milk, multiply so fast that in 12 hours their descendants will number as high as 10,000,000, and they will destroy the fat globules and sugar in three or four days unless the milk is sterilized. I want to tell you the only pure milk you can get is sterilized milk—that is, after you are weaned. The heavy mortality of bottle-fed babies is due to bacteria, which makes the food unsuitable, and which they are forced to eject. The medical world has searched for a long time to remedy this evil, and, as a result, the market is filled with various artificial foods, all with claims of superiority, and any of them are preferable to cow's milk, if the milk was ever subjected to the following exposures: If the milk pail was washed in dirty water; if the milker's hands and finger nails were dirty; if the milker or caretaker of the milk had a bad breath; if the strainer and every utensil that milk is placed in was not scalded, and most thoroughly, too, and kept in a place that it is as clean as it is possible for scalding water and willing hands to make it.

Nor can you have good or pure milk if you have dirty stables and dirty cows. The milk should be handled as quickly as possible where there is the least dust and by the cleanest of people, and kept in the cleanest of places."

The truth of the above-quoted address may be demonstrated by laboratory research, so far as the development of bacilli in milk is concerned.

Milk is a compound belonging to animal chemistry, and, when secreted by the glands, is to be considered an excrementitious product, whether it be in or outside the body. As such product it is devoid of life and becomes a favorable medium for the development of germs which are omnipresent in the air about us.

Milk infected by germs may cause irritation of the intestinal mucous membrane, the same as certain other foreign bodies. Disease results not so much because the germ is specific as on account of irritation produced.

Certain germs develop faster in milk than others, and will cause irritation to the intestinal canal in proportion to their numbers and the susceptibility of the mucous membrane to such irritants.

Purity in milking can be assured only by the greatest of care. Fortunately there are dealers in Philadelphia and other large cities who use the utmost precautions against transmitting germs through their supply of milk. Milking is performed by persons who use the greatest care as to cleanliness. Aseptic strainers of fine muslin are placed over the pails, the stream of milk is directed into a small pan placed on the strainer, to prevent the force carrying the germs through. The milk overflows the pan, gently filters through the cloth into the pail, and is at once placed in glass jars and delivered.

We believe that milk so managed will present the least danger as to germ infection, and will not need sterilizing, even in warm weather. The effect of such milk on children and invalids is so vastly superior to that obtained when the milking is done by the ordinary process that,

even though the price be a little higher, the economy is obvious.

As to tuberculous germs, their presence in milk is probably due to the germ infection of the animal. Their capability of infecting the individual who partakes of it lies not with the milk but the person, inasmuch as the excrementitious organs of such person must be impaired else the germs will have no favorable medium in which to lodge.

A CURE FOR APPENDICITIS.

Of late years a dread has gone abroad that every one who eats fruits with small seeds in them is pretty sure to run the risk of dying from appendicitis, or be forced to undergo a dangerous operation. So strong has this dread taken hold of the public mind that thousands refuse to eat small fruits when seeds have to be eaten with them. Grapes are always pitted by them, and blackberries, and even raspberries, with their small, insidious seeds, are taken entirely from the bill of fare.

The fact is that appendicitis occurs very rarely, and the percentage of people who eat fruit with seeds in them that are caught is insignificantly small. When the complaint does seize one it is not necessary to resort to an operation, except in severe cases, nor is it absolutely necessary to die. The most successful cure is to administer internally from one to two ounces of sweet oil every three hours until the pain and fever are relieved.

The seed which causes the trouble irritates the muscular tissue so that congestion follows, and this may soon cause inflammation of a very serious character. Sweet oil, administered in time and faithfully, allays the inflammatory condition, reduces temperature and relaxes the tension of the muscular coating of the intestines and appendix. Besides that it takes seed or all foreign substances with it and effects a complete cure. The patient should be kept in bed and poultices should be applied very hot over the seat of pain.

Surgery.

DR. T. H. MANLEY, New York.

COLLABORATOR.

LAPAROTOMY IN TUBERCULOUS PERITONITIS.

Frees, of the Giessen Gynecological Clinic, mentions the fact that operation statistics of tuberculous peritonitis show a great preponderance of women, whereas pathological registers disclose a predominance of men. The effusive form is usually looked upon as more favorable than the adhesive or obliterating. The author gives short details of 18 cases of tuberculous peritonitis with effusion treated by abdominal section. Nodules were found in all the cases on the visceral and parietal peritoneum. Twice the peritonitis appeared to start from the Fallopian tubes, but these were not removed, as the process was so very generalized; one of these operated on in 1893 is still living. In three others the clinical course, etc., made the same origin probable. In one of these cases the appendages on one side were removed, in another those on both sides, and in a third a right pyosalpinx with caseous contents, as well as an ovarian tumor apparently of the same nature; two of these are still living. As regards the operative procedure, as small as possible an incision is made in the linea alba, a digital exploration carried out, and the fluid evacuated. Some were drained for the first two days, but no difference was noted from those not so drained. In no case was death due to the operation. Of the 18 cases six were completely cured. The longest period since the laparotomy is five years and a quarter. In this case a second laparotomy had to be done nine months later. In another case the wound burst open and closed again after two months. This patient has been well for four years. The author mentions the different theories, mostly unsatisfactory, to account for recovery; he would attribute it to a variety of factors.—Deut. med. Woch., 1894, Nos. 45 and 46.

SUPRA PUBIC CYSTOTOMY.

M. Poucet, of Lyons, reported the results of 63 cases of cystostomy performed by himself.

In the beginning, he thought it highly important that we should distinguish those cases in which we operate for prostatic affections and those in which it has had recourse to for other conditions of the urinary passages.

The object of this operation is to establish a permanent opening for the passage of urine. He divided prostatic affections into those which were aseptic and the infected; though this division was rather theoretical than practical, as many were of a mixed class. With reference to the gravity this group only was important.

With 21 cases non-infected he had 21 cases; some definite and others temporary; that is to say, in a few prostatic symptoms some passed away and the opening above closed, while with others it remained patent.

False passages in the urethra, large hemorrhage, difficult and very painful catheterism are all formal indications for this operation.

In 42 infected cases the results varied, according to whether they were acute, subacute or chronic. In subacute cases cystostomy is but one means of relief. In 14 of this category four died after a few days, and the others lived from four to six months.

In chronic cases the results were worse yet, for in 24, seven died promptly after cystostomy, 10 lived less than a year, but 17 are now alive and comfortable.

Those who succumbed, he believed, sank, not from the operation, but the infected state of the prostate, which gave rise to a fatal form of septicemia.

With those who recovered, seven were continent, three partially continent, and in 12 there was complete incontinence.—*Le Progres Medical*, November 24, 1894.

THE CAUSE OF INGROWING TOE-NAIL.

Most authorities, says the Paris correspondent of the London Lan-

cet, August 25, state that this condition is due to the pressure of tightly fitting boots. Dionis, however, has observed this disease in unshod monks, and Binaud in bed-ridden tuberculous patients. Poucet, of Lyons, has shown that persons of lymphatic temperament, in whom the big toe is thick and the corresponding nail flat and small, are particularly subject to ingrowing of the nail. But the disease is frequently seen in the robust, in whom the great toe has been deviated from its normal direction by narrow-pointed boots. In these cases, however, M. Regnault ascribes the morbid condition of the nail to injury, such as a blow, combined with want of personal attention, which allows the culture in the groove of ordinary pyogenic microbes. Interrogation of the sufferer will often bring to light the occurrence of a contusion of the nail, followed in a few days by supuration at the external groove. Taken in time, these cases are easily treated by means of carbolic foot-baths and antiseptic dressings.

A NEW SURGICAL DRESSING.

Kikusi, a surgeon of Tokio, Japan, has called attention to a novel and what promises to be a very important article of surgical dressing. It is a form of charcoal derived from burning straw in a smouldering fire, or so arranged that the supply of air is insufficient for complete combustion. The little stalks of charcoal thus prepared are said to be highly hygroscopic, and to make a wonderfully cheap and efficient dressing for wounds. It may be applied directly or inclosed in little linen or cotton bags.—*National Druggist*.

CLASS IN PHYSICS.

Teacher—"Johnnie, what is a stratum?" Johnnie—"A stratum is a hen." Teacher—"Didn't I tell you that a stratum was a layer of anything?" Johnnie—"Yassum. 'Nain't a hen a layer of eggs?"—*National Druggist*.

Ophthalmology.

DR. J. A. TENNEY, Boston, Mass.
COLLABORATOR

CYCLOPHORIA.

Dr. Maddox gives in the *Ophthalmic Review* a new method of detecting cyclophoria. With a prism of six degrees, edge out, before the right eye, the patient is directed to look at a vertical line drawn on a piece of paper, and held at the near point of vision. Then suddenly rotate the prism to the vertical. The two images of the line are seen to cross each other at a small angle as they meet, before the eyes have time to fuse them. By rapidly rotating the prism, sufficient time is not given, and the angle is easily observed. The experiment may be varied by holding the line horizontally, when a weaker prism held vertically to start with will suffice.

A variation in the test is to draw a straight dotted line, and also a continuous red line parallel with it. These should be held horizontally. There is so little tendency to fuse with a vertical prism before the right eye of such a strength as to bring the false image of the dotted line over the true image of the red. There is so little tendency to fuse these two that the slightest angle between them can be leisurely observed. By drawing the two lines at various inclinations to each other, instead of being parallel, the angle can be accurately measured.

As regards latent torsion, it is important to bear in mind that in near vision apparent insufficiency of the obliques is just as physiological as latent deficiency of convergence, and in distant vision slight deviations are not unphysiological. Only extreme cases are probably to be regarded as likely to cause asthenopia.

According to Professor Panas 90 per cent. of retinal hemorrhages are caused by albuminuria. They have their seat in the layer of optic fibres, as it is there only that the vessels are of sufficient volume to produce

this form of hemorrhage. Oedema of the papilla exists at the same time, the optic nerve appearing as a reddish gray spot.

Sometimes the ophthalmoscopic appearances in albuminuric retinitis are marked, while the vision suffers scarcely at all; in other cases the patient has amblyopic symptoms, when no lesions can be discovered with the ophthalmoscope. The retinal affection is most severe, as a rule, when albumen is scarcely to be found in kidney disease.

Therapeutics.

DR. LOUIS LEWIS, Philadelphia.
COLLABORATOR.

AN ANTITOXINE FAILURE.

Dr. Dunnigan died of diphtheria at the General Hospital, in Buffalo on Friday, despite the use of antitoxine. After the first injection the patient's condition continued to grow gradually worse until the end came. The physicians at the hospital are loath to express themselves positively on the case, but the general opinion seems to be that the case had hardly been a fair test of the curative powers of antitoxine, as its administration had come too late, when the system had become so thoroughly impregnated by the ptomaines that the counteractive powers of the antitoxine proved inadequate.

ANTITOXINE OFFICIALLY COMMENDED.

Official reports in regard to the use of antitoxine in the districts of Trieste and Czernowitz show a large decrease in the mortality from diphtheria. The reports advise that the remedy be administered at the earliest possible moment.

"A NUTRITIOUS ARTICLE OF FOOD."

Dr. D. E. Salmon, chief of the Bureau of Animal Industry, Washington, D. C., says: "The flesh of horses in good condition is no doubt a nutritious article of food and may be

partaken of without danger to the consumer. The same may be said in regard to the flesh of several other species of animals which are not generally used for food in this country, and for which our people feel more or less repugnance. If horse flesh is used for human food, the consumer should of course have the means of knowing what he is eating. As horses slaughtered for this purpose are generally more or less broken down by hard usage and disease, there should be a rigid inspection of them at the time of slaughter. The Federal meat inspection law does not cover the inspection of horse flesh, and it is doubtful if the municipal authorities will maintain a sufficiently rigid inspection to insure the protection of consumers.

Both of the legs of a young lady of Boston were amputated at the knee recently to save her life. They were poisoned by the dye in red stockings which she had been wearing.

MECHANISM OF DEATH UNDER THE INFLUENCE OF COCAINE.

Maurel, of Toulouse, recently presented to the Paris Academy of Medicine (Sem. Med., November 14), a report embodying the results of some experiments on the toxic properties of cocaine. They showed that under the influence of that alkaloid the leucocytes undergo changes; they become spherical, rigid, increase in size, and no longer adhere to the walls of the vessels. On the other hand, as the capillaries contract under the influence of cocaine, thromboses and embolisms, particularly pulmonary embolisms, capable of causing fatal accidents may be produced. These changes in the leucocytes are seen even after small doses of cocaine, of a strength of 1 in 10; this explains the serious accidents which sometimes follow the administration of concentrated solutions of cocaine even in small doses. Pulmonary embolism being the accident more particularly to be feared in cocaine poisoning, it was a priori

probable that intra-arterial injections made in the direction of an unimportant viscus would be much less dangerous than intravenous injections. Maurel's experiments have shown that this hypothesis rests on a solid foundation; he was able to make injections of 5 grammes 10 centigrammes of cocaine per kilo. of body weight into the femoral artery of a rabbit without causing death. Maurel does not wish to be understood as teaching that the toxic action of cocaine is confined to its effect on the leucocytes; on the contrary, he thinks that it produces several other effects, in the front rank of which must be placed contraction of the small vessels.

PYOKTANIN IN MALIGNANT GROWTHS.

Dr. Moritz showed a patient with sarcoma of the tonsil and upper jaw, in whom considerable improvement had resulted from the use of a saturated solution of the yellow pyoktanin (auranum). In April last injections commenced, three times weekly, of five minims of the solution each time, into the tumor. Since then the tumor of the hard palate has entirely disappeared, and there is under the apparently healthy mucous membrane a soft place where the cone had become absorbed. The tonsillar tumor has diminished to half its size, and the patient, who had been suffering greatly from dyspnea and difficulty in swallowing, suffers now no further discomfort. Dr. Milligan, who had also observed the patient during the course of treatment, was able to confirm Dr. Moritz's statement.—Providence Medical Journal.

EXTERNAL USE OF GUAIACOL AS AN ANTIPYRETIC.

Brill, of Unverricht's clinic, first refers to the unpleasant symptoms which have been noted after the external application of guaiacol. He has used the remedy in four cases of pneumonia, five of enteric, four of phthisis, one of bronchitis and two of rheumatism; one c.cm. was first applied, and if without result 1.5 to two c.cm.; more than three

c.cm. was never used. Smaller doses are without ill effects, but they cannot bring down the temperature. By increasing the dose the unpleasant symptoms appear, and thus the value of the results obtained may be very doubtful. These unpleasant symptoms are profuse sweating, feeling of weakness and even collapse. These results were such as to make him give up the use of guaiacol as an antipyretic. He then investigated the antineuralgic action of the drug. In 22 suitable cases, mostly of rheumatic pains, the external application of guaiacol was distinctly useful. The painful parts were painted with guaiacol as rapidly as possible to prevent evaporation; it was then rubbed in, and the parts covered with gutta-percha. No unpleasant effect on the skin was noted. The antipyretic effect of guaiacol is due to its absorption through the skin and its action on the heat centres. The author concludes that guaiacol applied externally in doses of 1.5 to 3 c.cm. acts energetically as an antipyretic, but its use as such is not to be recommended, owing to unpleasant bye-effects. In doses of 0.75 to 1.5 it has an antineuralgic action in the most varied diseases, and is without unpleasant consequences.—*Centralbl. f. inn. Med.*, November 24, 1894.

MEDICAL LADIES IN FRANCE.

The medical profession possesses little or no attraction for the fair sex in France. At the commencement of the present session, out of 153 female medical students at the Parisian schools only 16 were natives of the country; whereas on the Arts' side the proportion was 141 out of 164. The number of studentesses entered at the faculties of science and law is likewise very small, the inscriptions for the year amounting to only seven and three respectively.

DANGERS OF GOLF.

A physician reports a case of rupture of muscular fibres in the thigh of a powerful athletic man whilst playing golf. All sports are dangerous, and some are brutal.

Medicine.

DR. E. W. BING, Chester, Pa.
COLLABORATOR.

SOME LITTLE KNOWN EFFECTS OF CHLORAL HYDRATE.

—HOLSTEIN.

Chloral exercises an action on the muscles and on the vaso-motor system. It is, in fact, an antispasmodic and vasodilator of great efficiency, as seen in its use in bronchial asthma. Given in small doses during the day chloral modifies the chilliness of the extremities so frequently complained of by anemics and neuropathic patients. Holstein considers chloral as the best remedy in the obstinate constipation, of neurasthenics, and which is rebellious to ordinary drugs. The laxative dose is 1 gr. 50 (25 grs.) given at bed-time. It can, of course, be used only occasionally, to prevent the chloral habit, and certain indications, as heart disease, or tendency to delirium, must be taken account of.

THREE CASES OF PULMONARY TUBERCULOSIS TREATED WITH CANTHARIDATE OF POTASSA.

The writer, Petheruti, treated these cases with this drug. One case was in a somewhat advanced state, while the other two showed signs of nurosis of the lung. In these the treatment was not carefully followed out. In the other case the injections were continued for about two months, and the following phenomena were noticed: Soon after each injection the urine was charged with urobilin, but no albumen was found in it, except once, when the dose being reduced it disappeared. The appetite and digestive functions improved from the beginning of treatment. Expectoration became easier and more abundant, cough less frequent and racking; the amount of bacilli increased during the first seven or eight injections. When the patient left the hospital there still existed a small quantity of bacilli in the sputum, and

examination of the lung showed no marked local change. Nutrition alone was sensibly improved. The injections were not usually followed by rise in temperature—the thermometer only gave the usual fluctuations in daily temperature—in short, there was no reaction such as seen after the injection of Koch's lymph.

The case was not followed, as the patient left the hospital at the end of eight weeks.—Rev. de Therap.

TREATMENT OF EPILEPSY.

J. Corton has had very favorable results by the use of oxide of zinc according to Herpin's method. He cured four out of seven cases. The doses varied for the adult 25 grs. to two grs. 50. The drug was given in increasing doses. The only difficulty is that it is liable to provoke nausea. The valerate of zinc has also acted very well.—Rev. de Therap.

DRUGS USEFUL IN AMENORRHEA.

R—Hydrag. bichlor.
Arsenate soda.
Ext. tinc. vom.
Potass. carb.
Ferri sulph. erosic.
To be given in the usual doses.

Maurel recommends groundsell (senecio) as a remedy in functional amenorrhoea. It is given in infusion, fl. extract or in the active principle senecine. It should be taken for 15 days before expected appearance.

NEW TREATMENT FOR NASAL HEMORRHAGE.

Trichloroacetic acid in strength of three per cent. solution is applied to the nasal septum. It is advisable to add some drops of a solution of cocaine, 1 to 20, to mitigate the burning sensation caused by the acid.—Rev. de Therap. M. C.

The Revue de Therapeutique Medico-Chirurgicale mentions a case of uncontrollable vomiting in a hysterical patient, which had lasted 10 months, as being cured by hypnotic suggestion at the hands of Dr. Dumontpallier, in three seances, and also a case of hysterical epileptic vertigo cured by means of the rotating mirrors.

The following operations were performed during the hypnotic sleep by Dr. Scheneltz, of Nice. The first operation was for removal of a scirrhus tumor of the breast, the second was for ectropion. Anesthesia was complete in each case. The advantages of this method are as follows:

* * *

It removes the dangers of chloroform, ether, etc., the sleep may be prolonged if necessary. The result is obtained in a very short time. If the sleep does not occur at once it may be hastened by closing the eyes gently, and when once closed anesthesia is generally complete.

* * *

Borax is recommended as a remedy in epilepsy.

* * *

Marrow is highly extolled as a curative in pernicious anemia.

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In prescribing aristol, or iodoform, in ointments, a little ether should be rubbed with the drug before mixing with the base. This gives a much finer division than is usually found.

* * *

THE SMALL-POX AMEBA.

Dr. Maximilian Herzog, of Chicago, claims to have discovered a "small-pox ameba," the presence of which in the blood on the first or second day after vaccination is the only sure test of a successful vaccination. No matter how swollen the arm or uncomfortable the patient, the vaccination is not effective unless the "ameba" is found, the unpleasant symptoms being due to the vaccine points being loaded with croton oil, or some other irritant!

CEMENT FOR IVORY.

The Bayer. Ind. u. Gew. Bl. recommends the following: Swell 40 parts of white gelatin in 600 parts of distilled water. Put in the waterbath and evaporate down to 100 parts. To this add two parts of mastic dissolved in 10 parts of alcohol, and finally stir in five parts of zinc oxide. This cement answers equally well for china and similar articles, but will not stand washing in hot water, unless performed very rapidly.

Miscellany.

A NEW CALEDONIAN ANTIMALARIAL TREE.

Commercial Agent Le Mescam writes from Noumea, New Caledonia, as follows: "From time to time I have received requests from citizens of divers Southern States for seed of the niaouli tree of New Caledonia. This tree (*Melaleuca leucodendron*) is the characteristic wood of this country. It blooms in January and June. Its wood is of a reddish color and hard; it works well, more especially for wheelwright purposes. It has a suberous or cork-like bark, and replaces cork in some of its usages. The leaves are employed for medical purposes; when distilled they give an essence which is a powerful antiseptic. It is generally admitted that the exceptional salubrity of New Caledonia is due to the essence of this wood. The vicinity of swamps is not dangerous to health here. It is probable that the above facts are known to some residents of the United States, hence the requests for seed which have reached me. I send a small parcel of the niaouli seed to the Department of Agriculture through the United States dispatch agent at San Francisco. The seed is still mostly attached to the boughs in its pods. These should be bruised before planting. Each pod contains a large quantity of seed, which are very small and shaped like a comma. They should be sown in spring, in hotbeds of light earth, well watered at all seasons, and always kept from frost. The young plants are ready for transportation in 15 months after sowing, when no more care is necessary in climates not subject to frost. —National Druggist.

Dr. J. J. Kinyoun, passed assistant surgeon U. S. Marine Hospital service, Washington, D. C., has spent several months in Europe investigating the production of antitoxine and

its use in the treatment of diphtheria. He has visited a number of hospitals where the antitoxine has been employed, as well as the Pasteur Institute in Paris, the Institute for Infectious Diseases (Koch's) in Berlin and the Schering Laboratories in Berlin. In his letter to the Supervising Surgeon-General, dated Berlin, November 6, 1894, he makes the following statement:

"Through the courtesy of Dr. Dittmar, the Director of the Schering Chemical Factory, I was also accorded the privilege of visiting their place to observe the methods employed by Dr. Aronson in obtaining the antitoxine, some of which I had seen used in the hospital wards.

"At one of their factories near Berlin the firm has a well-equipped bacteriological laboratory for producing the toxins and preparing the serum. Near by they have well-arranged stables and paddocks for the animals. At this time they have 70 horses, 30 sheep and a number of goats in various stages of treatment.

"The work as carried out by Dr. Aronson and his assistants compares favorably with any which I have seen in Berlin. He has all the necessary appliances in his laboratory, possessing the requisite knowledge and training in this special branch. Being provided with the facilities for good work, I see no reason why he cannot produce as good serum as any others here. In some of the technique I am inclined to believe it is better than that practiced by those in the Koch Institute, i. e., in the preparation of the serum. Aronson adds a small quantity of trikresol to the serum—0.4 to 0.6 per cent. This causes a slight flocculent precipitate, which is filtered off, and then the serum is passed through an unglazed porcelain filter, when it is transferred into small sterilized bottles and sent out for use.

"Aronson has not attempted to make more than one strength of the antitoxine. That which I saw used in the hospital had the same effects as Behring's No. 2 (1 to 1000). Aronson claims to produce a stronger serum than Behring."

Prescriptions.

ABSCESSSES.

- R—Calcii sulphidi, gr. j.
Sacch. lactis, gr. x.
M.—et. ft. chart. no. x. S. One every two hours.
- R—Ungt. belladon., oz. j.
Pulv. camphor., dr. j.
M. S. Apply locally, with slight friction. (Abscess of breast.)
- R—Iodoformi, dr. iiss-v.
Aetheris, oz. vj.
M. S. Inject oz. iii-v after aspirating abscess. (Cold.)
- R—Cerati resinae co., oz. j.
Olei olivae, dr. i-j.
M. S. Apply on soft linen. (When suppuration threatens in breast.)

ABORTION.

- R—Tr. opii deod., dr., ix.
Sod. bromid., dr. iij.
Chloral hydrat., dr. iss.
Syr. acaciae, oz. j.
Aquaе q. s. ad oz. iij.
M. S. dr. ij. in water every four hours.
—E. Wilson.
- R—Mist. asafoetidae, oz. viij.
S. oz. ss several times a day, in habitual abortion.
—Negri.

AGUE.

- R—Ferri redacti,
Quininae sulph., aa dr. ss.
Acid. arseniosi, gr. j.
M. Ft. in pil. no. xv. S. One, two or three times a day, after meals. (To restore to blood its normal constituents.)
—Bemiss.
- R—Ferri et Quin—Citrat., scr. i—dr. ss
Infus gentian, oz. iv.
M. S. oz ss two or three times a day.
- R—Quininae sulphat., scr. j.
Tr. ferri chloridi, dr. ij.
Aquaе cinnamom., dr. vj.
M. S. dr j two or three times a day in sweetened water.
—Bemiss.
- R—Ferri ammonio-sulphat., scr., ij.
Quininae sulphat., scr., j.
Acid sulphur, dil., dr. j.
Aquaе cinnamom., dr. vij.
M. S. dr. j in sweetened water twice a day. (Where there is a tendency to serous effusion).
—Bemiss.
- R—Magnesii sulphatis, oz. i-ij.
Ferri sulphatis, scr., ij.
Acid sulphur, dil., dr. ij.
Syr. aurant, cort., dr. vij.
Aquam, ad oz. vj.
M. S. dr. j in water twice daily (Restorative and eliminative).
—Bemiss.
—From Physician's Vade Mecum.

BOOKS AND PAMPHLETS RECEIVED.

- NOTES ON A FEW CLINICAL EXPERIENCES OF INHERITED SYPHILIS. By Burnside Foster, M. D., St. Paul. Reprint from Northwestern Lancet, 1894.
- THE RELATION OF STATIC DISTURBANCES OF THE ABDOMINAL VISCERA TO DISPLACEMENTS OF THE PELVIC ORGANS. By J. H. Kellogg, M. D., Battle Creek, Mich. Reprinted from the proceedings of the International Periodical Congress of Gynecology and Obstetrics, 1892.
- SYSTIC GOITRE WITH CASES IN PRACTICE. By A. Britton Deynard, M. D., New York. Reprinted from the Medical and Surgical Reporter, June 24, 1893.
- SURGICAL TREATMENT OF TUMORS OF THE NECK. By Thomas H. Manley, M. D., New York. Reprinted from "The Medical Brief," St. Louis, Mo., 1894.
- TUBERCULOSIS IN THE ANORECTAL REGION. By Thomas H. Manley, M. D., New York. Reprinted from "The Medical Brief," St. Louis, Mo., 1894.
- REPORT OF THE SURGEON-GENERAL OF THE ARMY TO THE SECRETARY OF WAR FOR THE FISCAL YEAR ENDING JUNE 30, 1894. Washington, Government Printing Office, 1894.
- REPORT OF THE SURGEON-GENERAL, U. S. NAVY, CHIEF OF THE BUREAU OF MEDICINE AND SURGERY, TO THE SECRETARY OF THE NAVY, 1894. Washington, Government Printing Office, 1894.
- DEFORMITIES OF THE FACE AND ORTHOPEDICS—TREATMENT OF SPINAL CURVATURES WITH NEW ALUMINUM SHELL JACKETS—ARTIFICIAL DEVICES FOR DEFORMITIES OF THE FACE. By Frank L. R. Tetamore, M. D., New York. Reprints from New England Med. Journal.
- CHAIRMAN'S ADDRESS, SECTION OF OBSTETRICS, A. M. A. By Joseph Eastman, M. D., LL. D. Reprinted from the Journal of the American Medical Association,

Wayside Notes.

DR. E. B. SANGREE, Philadelphia.
COLLABORATOR.

The editor of this journal recently published an article deploring the almost forgotten, or at least the greatly neglected custom of bleeding. While not at all upholding Dr. Sangrado's method of practice, I think we all meet with cases in which the abstraction of more or less blood would greatly help nature and expedite recovery, and sometimes some life.

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The withdrawal of even a small amount of blood has sometimes a surprising good effect, and one that is difficult to explain. Some years since I examined for a life insurance company a man of rather full habit, sedentary occupation and plethoric build. He told me that every year when the hot weather set in he was troubled by so much vertigo that he was unable to attend to his work. Were he to lean forward over his desk, for instance, he would be likely to tumble over after his head. If, however, he had wet cups applied to the back of his neck at this time he had no more trouble the remainder of the summer. In evidence he showed me his neck, which was scarred like a German duellist's face. An interesting feature of this case was the fact that his father suffered in the same way, and for many years had been cupped regularly once every summer.

I recall another instance of the comparative permanency in good result after a small blood-letting. A woman of 34 had been suffering some days from a very severe congestive headache. She had marked optic neuritis and was subject to such headaches, and I had tried other remedies on this particular one with trifling effect. Finally I applied several wet cups to the base of the neck posteriorly, and gave her a relief that was almost immediate and that lasted for months. Yet

hardly two teaspoonfuls of blood were drawn. In addition to these I have in mind several other cases of a similar character.

It is hard to explain satisfactorily the marked relief obtained, as it seems incredible that the abstraction of so small an amount of blood could give so considerable a result. An old proverb alludes to the "last straw that broke the camel's back," and it seems to me that in these cases the little bit of blood drawn has acted like the well-known "last straw." The blood vessels, of course, are very elastic, and will readily accommodate themselves to varying quantities of blood, but there must be a limit to their power of accommodation, and when that is reached trouble will occur.

The over tension probably results in a semi-paralytic condition of the vessel walls, and the consequent engorgement pressing upon the nerve filaments gives rise to pain. If this is granted, then the condition ought to be relieved by the abstraction of even a small amount of blood; the vessel walls thus getting a chance to regain their tonic force the current onward in the wonted manner and take away the pressure from the surrounding tissues. The mere act of cupping may also by reflex nerve stimulation assist in bringing about the good result.

AMALGAMATION OF ZINC BATTERY PLATES.

Oppermann, in Bayer. Ind. u. Gewerb.-Bl., recommends the following process: To an aqueous mixture of mercury sulph-oxide add sufficient sulphuric acid to exactly dissolve. To the solution add sufficient aqueous solution of oxalic acid to make a white mixture the consistency of thin broth. A small amount of ammonium hydrochlorate is then added, and the liquid painted over the zinc elements with a brush. A strong friction with clean rags is then made, and finally the elements are rinsed first in concentrated sulphuric acid, and afterward in water. The amalgamation is very complete.